

Improving crop health and irrigation system maintenance at berry farm



Crop	Unit type	Irrigation system	Results
Strawberry, blueberry	HPGen A1000	Drip	<ul style="list-style-type: none"> Improved irrigation uniformity and plant health Cleaner irrigation water with higher oxygen levels

The customer

Advanced berry greenhouse in Denmark

Hunsballe Grønt is a modern greenhouse operation in Denmark, with about four hectares of covered area. They grow primarily strawberries and blueberries under glass and poly-tunnels. The operation uses an efficient, state of the art irrigation system with fertigation and a mixing tank capable of customized protocols. However, despite the modern irrigation setup, Hunsballe Grønt struggled with achieving their targeted irrigation uniformity due to high levels of organic matter present in the irrigation source, an outdoor reservoir. Non-uniform irrigation is a serious concern that severely hampers the health of the plants. Lower amounts of water reaching the plant will weaken and stress it. A stressed plant is also prone to attacks from pests, fungi or diseases. It can lead to plants dying out during a season. It was also clear from the murky water in the



Irrigation water reservoir (top) and inside of glasshouse at Hunsballe Grønt



lines that a large degree of biofouling was present in the system. To overcome these issues, an HPGen A1000 model was installed and integrated with the irrigation system.

The problem and solution

Improved water quality and irrigation uniformity with HPGen™

The HPGen A1000 was installed in the irrigation room and set to operate automatically with a buffer tank. Prior to installation, the drippers were analyzed, and a large proportion were clogged, meaning little to no water was coming through them. To overcome this, the drip system would normally have to be replaced between seasons. Initially Peroxide UltraPure™ was only dosing in a section of the greenhouse to compare with the non-dosed section.

After running with the HPGen for a season, the treated drippers exhibited virtually no clogging, whereas the untreated section had the same performance as before with clogging and non-uniform irrigation. The benefits of the HPGen system are clear, a more efficient irrigation system where maintenance of the drip lines has been eliminated and delivery of fertilizer optimized. With these results, dripper lifetimes can be greatly extended, plants remain healthy throughout the season and stand a better chance of fending off attacks from pests, diseases or fungi. From tubing to water exiting the drippers, the system could be maintained in a clean state.



1 Before treatment

2 After treatment



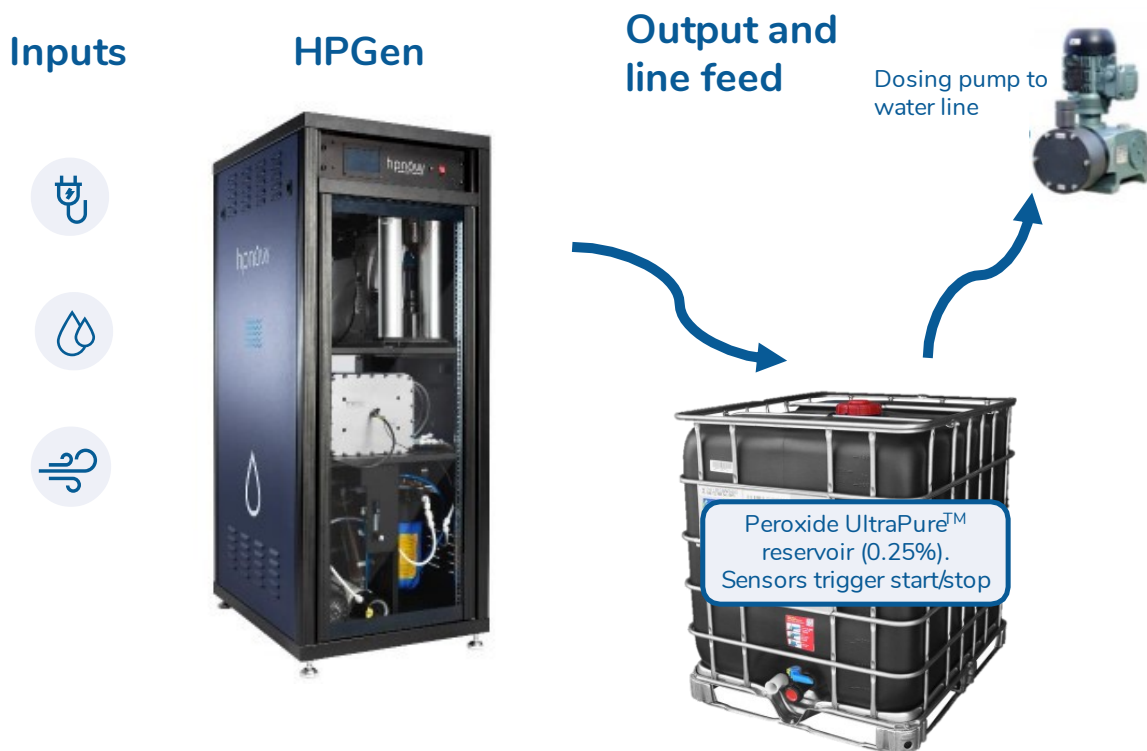
The grower commented:

We did a trial where we dosed Peroxide UltraPure in one section and could compare to a section which didn't have the treatment. We could see a clear difference in how the drippers were kept clean with Peroxide UltraPure, and plants were healthier. Claus Hunsballe, Owner, Hunsballe Grønt

With the advantages of the system being clear, the HPGen system was integrated to treat all the sections in the greenhouse.

HPGen setup

The HPGen was installed in the irrigation room and set to automatically fill a buffer tank with Peroxide UltraPure™. Dosing was done through a proportional dosing pump, which is both simple and effective. The system operates completely autonomously, without need for user intervention. Peroxide UltraPure™ is generated at a concentration of 0.25%, which is very safe and poses no danger to humans, plants or equipment, but is strong enough to effect the desired operational results.



Learn more about the HPGen™ system and its benefits for agriculture at:

<https://www.hpnnow.eu/irrigation-water-treatment/>